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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/808,812 | 03/15/2001 | Peter H. Markusch | Mo-5942/MD-00-46-PU | 6332 |

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BAYER CORPORATION
PATENT DEPARTMENT
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EXAMINER

BISSETT, MELANIE D

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1711

DATE MAILED: 09/09/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

11/3

Office Action Summary

Application No.

09/808,812

Applicant(s)

MARKUSCH ET AL.

Examiner

Melanie D. Bissett

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 12-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2. 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-11, drawn to a two-ply polyurethane composite, classified in class 428, subclass 311.11.
 - II. Claims 12-24, drawn to a method of making a two-ply composite, classified in class 427, subclass 384+.
 - III. Claim 25, drawn to a different method of making a two-ply composite, classified in class 427, subclass 136.
 - IV. Claims 26-27, drawn to a canal or ditch, classified in class 405, subclass 270.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product can be made without curing the polyurethane composition.

3. Inventions III and I are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process

(MPEP § 806.05(f)). In the instant case the product of group I can be made by applying the polyurethane to a rigid material and applying a soft geotextile to the adhesive layer.

4. Inventions II and III are drawn to different methods for making the product.

These methods are restrictable since they are patentably distinct inventions. One method is drawn to steps of applying a polyurethane to a substrate and adhering a second layer, while the other method is drawn to steps of applying a polyurethane to a ditch, contacting a rigid geotextile to the polyurethane, and placing a soft geotextile on top of the rigid geotextile.

5. Inventions I and IV are related as mutually exclusive species in an intermediate-final product relationship. Distinctness is proven for claims in this relationship if the intermediate product is useful to make other than the final product (MPEP § 806.04(b), 3rd paragraph), and the species are patentably distinct (MPEP § 806.04(h)). In the instant case, the intermediate product is deemed to be useful as a weatherproof covering and the inventions are deemed patentably distinct since there is nothing on this record to show them to be obvious variants. Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions anticipated by the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention. In this case, the final product would be indistinguishable from the intermediate since the intermediate is cured to form the final product.

6. Inventions II and IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process can be used to form a weatherproof cover, which is not applied to a ditch.

7. Inventions III and IV are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the product is described as being formed by a method different from the method of group III.

8. During a telephone conversation with Carolyn Sloane on 8/29/02 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-11. Affirmation of this election must be made by applicant in replying to this Office action. Claims 2-27 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

9. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

10. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

11. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

12. Claim 1 first describes a "polyurethane geotextile composite", where "the solidifiable liquid polyurethane composition" is further limited. However, the claim does not mention a solidifiable liquid polyurethane component before limiting "the solidifiable liquid polyurethane composition". Because of lack of antecedent basis in the claims, it is unclear how the polyurethane composition fits into the composite.

13. The terms "rigid" and "soft, pliable" in claim 1 are relative terms which render the claim indefinite. The terms "rigid" and "soft, pliable" are not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. Some of the same materials have been listed by the applicant as "rigid" materials and as "soft, pliable" materials. Thus, for the purposes of this Office action, the examiner will treat the "rigid" geotextiles as any geotextile materials having an amount of rigidity and will treat the "soft, pliable" geotextiles as any geotextiles having an amount of flexibility.

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1-2, 5-6, and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Gasper et al. as evidenced by Sinclair and Kausch et al.

16. Gasper discloses a flexible sheet material impregnated with a liquid polyurethane resin (abstract). The sheet is wrapped around a padding or itself, forming multiple layers of support material and padding material (col. 5 lines 8-36). The support material can be formed from materials comprising fibers such as polyester, polyolefin, fiberglass, etc. (col. 4 lines 26-40) and is flexible. Since the material is formed from similar materials as those of the applicant's invention, and since the materials are describes as supportive, it is the examiner's position that the materials have an amount of both rigid and flexible character. Thus, multi-layered impregnated materials would form a composite having a rigid geotextile bonded to a soft, pliable geotextile. The polyurethane resin used to impregnate the material includes an isocyanate and active hydrogen compound, where diphenylmethane diisocyanates are preferred isocyanates (col. 2 lines 46-58). A preferred isocyanate, Isonate 143L, is a diphenylmethane diisocyanate having an NCO content of 29.2% (about 30%) and a viscosity of 33 cps (33 mPa*s) (Sinclair, col. 3 lines 19-26). Preferred polyols include polypropylene oxide polyols such as PPG 425 (col. 3 lines 16-27), a polypropylene ether diol having a

molecular weight of 400 (Kausch et al., col. 7 lines 64-65). Catalysts are also included in the polyurethane compositions (col. 4 lines 9-17). Note that at least example 1 does not mention the use of fillers or low-molecular-weight diols or triols.

Claim Rejections - 35 USC § 103

17. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

18. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Payne in view of Adam et al., and vice versa. Payne (USPN 4,872,784) and Adam et al. (USPN 5,421,677) can be found on the applicant's Form PTO-1449.

19. Payne discloses ditch lining materials formed by impregnating a solidifiable liquid mixture into a porous blanket (abstract). Support blanket materials include woven and non-woven materials made from fibers, yarns, and ribbons (col. 3 lines 38-48). The reference also teaches liners having a second blanket bonded by the liquid mixture onto the support blanket (col. 6 lines 4-19). Since the blanket materials are described as support materials and are shown as flexible materials (Figures 1-2), it is the examiner's position that the blanket materials of the invention would inherently possess both rigid and flexible character. Thus, a composite having two blanket sheets would anticipate a rigid geotextile bonded to a pliable textile. Payne suggests polyurethane materials as

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liquid mixtures (col. 5 lines 55-58). However, Payne does not disclose the applicant's claimed specific polyurethane composition.

20. Adam discloses ditch liners made by impregnating a solidifiable liquid mixture into a porous blanket, where the solidifiable material is a the reaction mixture of a polyisocyanate, a catalyst, a propylene oxide adduct of an alkanolamine, a propylene oxide adduct of a low molecular weight polyol, and a propylene oxide adduct of a low molecular weight diol (abstract). The example shows the combination of a polymethylene poly(phenyl isocyanate) having an NCO content of 31.6% by weight and a viscosity of 200 mPa*s, 10 parts of a propylene oxide/monoethanolamine adduct having a molecular weight of 480, a propylene oxide adduct of glycerin having a molecular weight of 670, and a propylene oxide adduct of propylene glycol having a molecular weight of 2000. Organic tin catalysts are used in the invention (col. 4 lines 36-43). The polyurethane mixtures of the invention cure in a reasonable amount of time without externally applied heat (col. 2 lines 22-25). Therefore, it is the examiner's position that it would have been prima facie obvious to use Adam's polyurethane compositions in Payne's invention to provide liquid adhesive materials having improved cure processibility.

21. Likewise, Adam applies as above for a ditch liner comprising a porous blanket and solidifiable polyurethane liquid mixture. The reference refers to Payne (USPN 4,872,784) for the liner-forming process and apparatus (example; col. 2 lines 26-30). However, Adam does not suggest the use of an additional blanket layer. Payne suggests the use of such a second blanket layer, also demonstrating the structure (col.

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6 lines 7-13; Figures 2, 5) as a preferred embodiment of the invention. Thus, it is the examiner's position that it would have been prima facie obvious to include a second blanket layer in Adam's invention to form a ditch liner having equally improved cure processibility.

22. Payne and Adam apply as above, failing to mention the thickness of the blanket layers. However, since the object of both inventions is to form ditch liners with improved cost and durability, it is the examiner's position that it would have been prima facie obvious to choose the blanket layers of any thickness necessary to optimize durability and cost.

23. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Payne in view of Adam et al., and vice versa as applied to claims 1-8 above, and further in view of Lou et al.

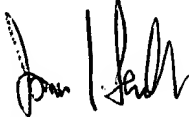
24. Payne and Adam et al. apply as above, failing to mention the second blanket layer as having a burnished side. Lou teaches that fabrics made from synthetic organic fibers can be burnished (col. 1 line 56-col. 2 line 1), where the burnishing step serves to provide an abrasion-resistant, uniform-appearing surface (col. 4 lines 11-14). Since durability is mentioned in both Payne and Adam as a quality to be improved, it is the examiner's position that it would have been prima facie obvious to use a porous blanket having at least one burnished side to improve abrasion-resistance and thus improve durability of the composites.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (703) 308-6539. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (703) 308-2462. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

mdb
September 4, 2002


James J. Seidleck
Supervisory Patent Examiner
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